Mata Kuliah	: Fisika I	Sifat	:
Kelompok	:	Waktu	:
Hari,Tanggal	:	Dosen	:

1. Thermometer scale x has a melting point of 40^o and the boiling point of 160^o degrees. Thermometer scale y has a melting point of 20^o and the boiling point of 180^o degrees. Calculate the temperature :
    a. 20^o X = ……. ^{o}Y
    b. Tx + Ty = 80, then Tc = …… ^{o}C
2. 190 cm long metal wire at 0^o C and the increased length of 0.2 cm when heated to 100^o C. The metal in volume 390 cm^3 at 20^o C, calculate how much the increased volume at a temperature of 70^o C ?
3. If 200 g of water 10^o C mixed with 100 g of t^o C water produces a mixture with a final temperature of 30^o C, what is the temperature t ?
4. Give examples in daily life, and explain the principles of :
    a. Thermic energy transfer
    b. Law of thermodynamics
5. A vibrating object in simple harmonic with equation of $y=5 \sin (3\pi t + \pi/6)$. y in meter, t in seconds, and scale angle in radians. Determine :
    a. Amplitude, frequency and the period of motion
    b. Instantaneous velocity and acceleration
    c. Position, velocity and acceleration at t=2s
    d. Maximum velocity and acceleration
    e. Kinetic energy and potential energy at t=1s if m= 100g
    f. Total energy

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